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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,860	11/28/2001	Ronald D. Blum	027001-000310US	9812

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TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

BOECKMANN, JASON J

ART UNIT	PAPER NUMBER
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3752

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/994,860	Applicant(s) BLUM ET AL.	
	Examiner Jason J. Boeckmann	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/28/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 33-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 33-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-17 and 33-36 are rejected under 35 U.S.C. 101 because the disclosed invention is wholly inoperative and therefore lacking credible utility. What has been disclosed is a concept more in the realm of speculation and conjecture rather than the reduction of an idea to a practical application based on science and technology.

Regarding claim 1, applicant claims a method of making a reduced intensity hurricane by positioning a plurality of submersibles in a hurricane interception area; maneuvering the submersibles to a predetermined depth and releasing a gas during a predetermined amount of time, the gas forming bubbles which rise in plume toward a surface to cool the surface of the ocean, thereby reducing the intensity of the hurricane. In order for an invention or process to have credible utility, the applicant's disclosure must contain sufficient evidence and reasoning to permit a person of ordinary skill in the art to believe the asserted utility. In this case, the application does not contain sufficient information to permit a person of ordinary skill in the art to believe that the process disclosed either could be implemented or could achieve the asserted useful result, since applicant has shown no evidence of reducing the speculation and conjecture to practice in either a laboratory or natural environment setting. For example, taking into consideration the enormous size of a hurricane, the process of modifying a hurricane

disclosed by applicant would take more than the resources realistically available to mankind.

On the issue of compliance with the utility requirement of 35 U.S.C. 101, the following statement made by the Supreme Court of the United State is on point:

"This is not to say that we mean to disparage the importance of contributions to the fund of scientific information short of the invention of something "useful", or that we are blind to the prospect that what now seems without "use" may tomorrow command the grateful attention of the public. But a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion. "[A] patent system must be related to the world of commerce rather than to the realm of philosophy".

See, Brenner v. Manson, 148 USPQ 689, 696 (US SupCt 1966).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 and 33-36 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which is most nearly connected to make and/or use the invention.

Since the asserted utility is not credible for the reason set forth above, one skilled in the art would not know how to make and use the claimed invention. For example, in claim 1, the assertion that reducing the hurricane intensity by using the submersibles to release a gas to form a plume to cool the surface of the ocean and thereby, to reduce the intensity of the hurricane, is not feasibly supported by the specification in exact terms (i.e. the grand scale or vast area of the release site, the amount of gas that is required to affect the hurricane, the number of submersibles required for the process, etc.).

Furthermore, the standard for enablement is whether a person skilled in the art would have sufficient information from the application disclosure to make and use the claimed invention without undue experimentation. In this case, the amount of experimentation necessary to perform the process disclosed would be undue. Undue experimentation would be necessary because:

- The claimed invention is broad and sweeping in scope.
- The nature of the invention is a large-scale environment change.
- The level of one ordinary skill in the art is best characterized as that of a theoretical scientist dealing in probabilities and possibilities rather than that of an engineer dealing in practical applications of technology.
- The outcome of the disclosed concept is entirely unpredictable.
- The application is devoid of working examples.

- The quantity of experimentation needed to use the invention based on the content of the disclosure can only be characterized as astronomical considering the lack of background information, past experiment, and specific detail.

Response to Amendment

The declaration by Captain Neil E. Rondorf, under 37 CFR 1.132 filed 11/5/2007 is insufficient to overcome the rejection of claims 1-17 and 33-36 based upon 35 U.S.C. 101 and 35 U.S.C. 112, first paragraph as set forth in the last Office action because:

In reviewing the above mentioned declaration, the examiner respectfully questions the assertion that Captain Rondorf is a disinterested third party with no financial interest in the assignee due to the fact that he is receiving \$200/hr plus reasonable expenses for his time spent on the declaration. If Captain Rondorf is receiving monetary compensation, there appears to be a financial interest.

The examiner also points out that there is a discrepancy between the applicant's arguments filled on 9/15/2004 and the above mentioned declaration. The applicant's state on the record that "submersibles of the kind required for this application do not presently exist" (page 13, lines9-12), which clearly indicates that at the time of the invention, the applicants were not in possession of the technology and resources to make and or use the claimed submersibles, however, Captain Rondorf asserts that these submersibles already exist and have been in use on or before the filing of the present application. Captain Rondorf is not a named inventor in the present application,

and therefore the applicant's cannot rely on him as a third party to provide the details on how the invention would be implemented.

Captain Rondorf talks about how submarines, specifically the Trident and the Typhoon, could, and have been converted to do different tasks than they were originally designed, but does not say that they have ever been converted to carry and disperse large amounts of liquid carbon dioxide.

Lastly, there appears to be a flaw in Captain Rondorf's reasoning on how many submersibles would be needed in order to carryout the claimed invention. Captain Rondorf asserts that the US Navy has successfully towed a naval research vessel NR-1 which has an approximately volume of 32,400 cubic feet (917 cubic meters), but bases his calculations on using a Typhoon hull which has a volume of approximately 73,000 cubic meters. It will take approximately 73 NR-1 vessels to provide the amount of gas that one Typhoon hull can provide, therefore, the calculations presented on page 5 of the declaration are off by a factor of about 73.

The declaration by Vickie Lien Singleton, under 37 CFR 1.132 filed 11/5/2007 is insufficient to overcome the rejection of claims 1-17 and 33-36 based upon 35 U.S.C. 101 and 35 U.S.C. 112, first paragraph as set forth in the last Office action because:

In reviewing the above mentioned declaration, the examiner respectfully questions the assertion that Vickie Lien Singleton is a disinterested third party with no

financial interest in the assignee due to the fact that he is receiving \$200/hr plus reasonable expenses for her time spent on the declaration. If Vickie Lien Singleton is receiving monetary compensation, there appears to be a financial interest.

It is also noted that the present invention does not use the exact methods or diffusers that are being used in Ms. Singleton's calculations. The applicants even go as far as to admit, that the bubble plume methods of their invention have never been used in open-ocean, upper water column environments (specification, paragraph 28). If that is truly the case, then the calculations of Ms Singleton cannot properly be used to model the present invention.

Ms. Singleton correctly calculates the number of linear and circular diffusers needed to up well at a rate of at least 12.1 million cubic meters per second, but does not explain, show or prove how the surface temperature of the ocean of a given area would be affected by that amount of upwelling.

Lastly, it is noted that Ms. Singleton calculates that 233 linear or 236 circular diffusers would be needed to perform such upwelling. However, the declaration submitted by Captain Rondorf, discussed above, estimates that only 19 submersibles would be required to supply the proper amount of gas. That would mean that each submersible would need to have approximately 12 diffusers connected to its outer shell. The specification appears to only have support for each submersible having a single diffuser.

The declaration by Isaac Ginis Ph.D., under 37 CFR 1.132 filed 11/5/2007 is insufficient to overcome the rejection of claims 1-17 and 33-36 based upon 35 U.S.C. 101 and 35 U.S.C. 112, first paragraph as set forth in the last Office action because:

In reviewing the above mentioned declaration, the examiner respectfully questions the assertion that Isaac Ginis Ph.D. is a disinterested third party with no financial interest in the assignee due to the fact that he is receiving \$200/hr plus reasonable expenses for his time spent on the declaration. If Isaac Ginis Ph.D. is receiving monetary compensation, there appears to be a financial interest.

Isaac Ginis Ph.D. merely shows numerical modeling of how a reduction of sea surface temperatures by 2.5 degrees would affect a numerical model of a hurricane, however, he does not address the rejections at hand. The claims were rejected for being inoperative and lacking credible utility as well as lacking enablement. Isaac Ginis Ph.D. does not address how the claimed invention is capable of reducing the sea surface temperatures by 2.5 degrees, or if the present invention contains a disclosure sufficient to enable one of ordinary skill in the art to reduce the surface temperatures by 2.5 degrees.

Response to Arguments

Applicant's arguments filed 4/28/2008 have been fully considered but they are not persuasive.

The three affidavits submitted on 11/5/2007, are insufficient to overcome the rejection of claims 1-17 and 33-36 based upon 35 U.S.C. 101 and 35 U.S.C. 112, first paragraph as set forth in the last Office action due to the explanations provided above.

Regarding the Rondorf declaration, it is noted that there appears to be a disconnect in Rondorf's declaration between the Typhoon and the NR-1 submersibles. It appears that the Typhoon hull is being used for the calculations to determine a number of 19 typhoon hulls, but when it come down to how the submersible is to arrive on site, Rondorf discusses how the NR-1 submersible is towed to its location. Nowhere does Rondorf discuss the size difference in the NR-1 and the typhoon submersibles and the feasibility of towing a hull the size of the typhoon.

Regarding the Singleton declaration, it is noted that the bubble plume methods of the invention have never been used in open-ocean, and it appears that the Singleton declaration does not address the fact that they have never been tested with actual ocean currents at the actual depths needed to perform the present invention.

Regarding the Gins declaration, it is noted that the Gins reference does not address how the surface area of the ocean would be reduced in the exact spot at which the hurricane will be moving to. It is noted that since the bubble pluming will be taking part deep below the surface, and there is no discussion of how the currents affect where the bubbles reach the surface. Additionally, Gins does not specifically discuss how the correct locations for releasing the bubble plums are determined.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason J. Boeckmann whose telephone number is (571)272-2708. The examiner can normally be reached on 8:00- 5:00, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. J. B./
Examiner, Art Unit 3752
7/16/2008
/Len Tran/
Supervisory Patent Examiner, Art Unit 3752